2. *Collect the right amount of plant material.* At the seedling stage, 30 individual plants is an adequate sample. As the crop develops and leaves enlarge, take enough MRMLs to represent field conditions accurately.

For a predictive sample, collect MRMLs from at least 8–12 areas and submit them as one sample. Collect a separate sample for each different soil type or growing condition in a field.

3. *Place the appropriate plant sample in a paper bag or envelope* (provided by the Agronomic Division). Plastic containers should not be used because heat build-up causes plant tissue to decompose and may affect results.

4. *When submitting samples for diagnosis of growth or appearance problems, also submit matching soil samples from the problem area.* Soil analysis combined with plant analysis provides a more complete picture of nutrient-related problems.

5.*Complete Plant Sample Information form AD-4*. For most accurate recommendations, describe plant appearance, fertilizer history and environmental conditions on the form.

6. *Send tissue samples and any matching problem soil samples to the address given on this brochure*. Enclose the appropriate processing fee for each sample.

North Carolina Department of Agriculture and Consumer Services

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(919) 733-2655

Mailing Address
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Raleigh NC 27699-1040

Physical Address [DHL, FedEx, UPS]
4300 Reedy Creek Road
Raleigh NC 27607-6465

For more information on sampling, interpreting agronomic reports or implementing recommendations, contact the regional agronomist assigned to your county.

www.ncagr.gov/agronomi/rahome.htm

Agronomic Sampling
Folder No. 8

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Production Tools for Tobacco Growers:

Solution & Plant Analyses

The Agronomic Division services provide tobacco growers with information a) to optimize the nutritional status of their crop, b) to monitor and safeguard environmental quality, and c) to manage fertilizer usage economically. Many growers already use soil testing, nematode assay, and field services to their advantage. Fewer growers, however, make full use of the benefits of solution and plant tissue analyses.

Solution analysis: why to use it

Solution analysis provides information on several parameters important to uniform seedling growth—such as alkalinity, pH, electrical conductivity (soluble salts), sodium absorption ratio, and nutrient concentrations (N, P, K, Ca, Mg, S, Fe, Mn, Cu, Zn, B, Na, Cl). In addition, agronomists give recommendations for corrective action when necessary.

Solution samples: how to collect them

January is the time for growers to analyze the source water that they plan to use in tobacco transplant float beds. Growers who identify potential problems early can take corrective action before filling beds and adding fertilizers. After fertilizer is mixed into the float bed, growers should also test the nutrient solution to verify the concentrations of nutrients present.